

## 2-Deoxyglucose Fluorometric Assay Kit

**Cat. No.** Kit-0004    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>Product Overview</b> | 2-Deoxyglucose Assay Kit (Fluorometric) is a quantitative fluorometric determination of 2-deoxyglucose.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Description</b>      | Glucose uptake is an important biological process for studying cell signaling and glucose metabolism. Among many different methods available for measuring glucose uptake, 2-deoxyglucose (2-DG) has been widely used because of its structural similarity to glucose. As with glucose, 2-DG can be taken up by glucose transporters, and metabolized to 2-DG-6-phosphate (2-DG6P). 2-DG6P, however, cannot be further metabolized, and thus accumulates in the cells. The accumulated 2-DG6P is, therefore, directly proportional to 2-DG (or glucose) uptake by cells. In 2-Deoxyglucose Assay Kit (Fluorometric), the accumulated 2-DG6P is enzymatically oxidized and coupled to PicoProbe, which generates fluorescence in the presence of NADPH. This easy to use non-radioactive kit can detect glucose uptake as low as 50 pmol/well and can be used for a variety of cell types. |
| <b>Applications</b>     | Measurement of glucose uptake in response to insulin, growth factors, cytokines, mitogens and nutrients, etc. Analysis of glucose metabolism and cell signaling in various cell types. Screening anti-diabetic drugs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Target Species</b>   | Mammals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Usage</b>            | For research use only (RUO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Storage</b>          | Store kit at -20°C, protected from light. Warm all Buffers to room temperature before                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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use. Briefly centrifuge all small vials prior to opening.

**Kit Components**

Extraction Buffer. Cap code: NM. 17 ml Neutralization Buffer. Cap code: clear. 1 ml 2-Deoxyglucose (2-DG, 10 mM). Cap code: purple. 1 ml 2-DG Uptake Assay Buffer. Cap code: MW. 10 ml Enzyme Mix (Lyophilized). Cap code: green. 1 Vial PicoProbe™ (in DMSO). Cap code: blue. 0.2 ml 2-DG6P Standard (Lyophilized). Cap code: yellow. 1 Vial

**Detection method**

Fluorometric

**Compatible Sample Types**

Cell Lysate

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